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BOTULISM AND SPOILED CANNED FOOD.

From time to time there have been published in the Public Health Reports accounts of outbreaks of botulism which were definitely traced to the eating of canned goods which presented recognized evidence of spoilage, and warning has been given against the use of all canned food which shows the least sign of being spoiled.

The Bureau of Chemistry, Department of Agriculture, has recently investigated a fatal case of botulinus poisoning which occurred in Seattle in the latter part of February, 1921. The facts of prime importance in this case were: (1) That the poisoning was due to the eating of home-canned string beans; (2) that the method of canning appears to have been an approved one; (3) that the servant recognized the spoilage; (4) that the patient (Mrs. M. A. L.), in spite of the recognition of the spoiled condition of the food, ate enough to cause her death; and (5) that three small pieces of bean were sufficient to cause death.

In an article¹ published in Public Health Reports for February 13, 1920, it was stated: "As a further measure of precaution, no food of any description showing even the slightest unnatural odor, unnatural color, swelling of the container, signs of gas, or any evidence of decomposition whatever, should be used for food purposes. In practically every case of botulism the food was shown to have had an offensive or abnormal odor. While all spoiled food may not contain *Bacillus botulinus*, any spoiled food, even though the spoilage be slight, may contain it, and, in view of the fatal effect of very small amounts of the toxin which this organism generates, the only safe rule is to examine carefully all food products before they are served and to discard those which are even slightly suspicious."

It is evidently impossible to accomplish the removal of all spoiled food from the market or to provide against all conditions in which spoiled food may be presented to the housekeeper from time to time. In view of these limitations it is necessary to bring about a general recognition of the dangerous character of food which shows clear physical evidences of spoilage, and to call attention to the stringent necessity of discarding all canned goods deviating from the normal.

¹ Botulism—Protective Measures and Cautions from the Bureau of Chemistry, U. S. Department of Agriculture: Public Health Reports, Feb. 13, 1920, pp. 327-330.

Other observations made by the representative of the Bureau of Chemistry on the recent case in Seattle are of interest to persons engaged in the study of the distribution of spores of *B. botulinus* in nature. These relate to spore-bearing soil and endemic foci.

The beans in this case were grown on a farm at Yelms, Wash., where, about a year previously, six hogs became sick, presenting symptoms resembling botulism poisoning. Two died. The hogs were not fed on garbage and were kept in the open. The ground had not been cultivated.

It is possible that this ranch is an endemic focus of botulinus infection, and the Bureau of Chemistry has secured samples of the soil and of the hog dung for bacteriological examination.

THE NOTIFIABLE DISEASES.

PREVALENCE DURING 1919 IN CITIES OF 10,000 TO 100,000.

ANTHRAX, CEREBROSPINAL MENINGITIS, DIPHTHERIA, INFLUENZA, MALARIA, MEASLES, PELLAGRA, PNEUMONIA (ALL FORMS), POLIOMYELITIS (INFANTILE PARALYSIS), RABIES IN ANIMALS, RABIES IN MAN, SCARLET FEVER, SMALLPOX, TUBERCULOSIS (ALL FORMS AND PULMONARY), AND TYPHOID FEVER—CASES REPORTED, CASE RATES, DEATHS REGISTERED, DEATH RATES, FATALITY RATES, AND AVERAGE NUMBER OF CASES REPORTED DURING PRECEDING YEARS.

The tables shown on the following pages were compiled from data furnished by the health officers of cities. Requests for information were sent to all cities of the United States having 10,000 population or more. The data for cities having more than 100,000 population were published in the Public Health Reports, volume 35, No. 51, December 17, 1920. Similar data for States were published in the Public Health Reports, volume 36, No. 8, February 25, 1921.

The present article contains reports from cities having between 10,000 and 100,000 population which responded to the request for information. It is believed that practically all cities are included which have records of morbidity from communicable diseases which are of value for statistical purposes.

The populations given and which were used in computing the rates were estimated as of July 1, 1919, from the preliminary reports of the census of January 1, 1920, and the reports of the census of April 15, 1910. The figures given probably differ somewhat from estimates which will be made later, which will be based on the final reports of the 1920 census and will take into consideration changes in area of the cities between 1910 and 1920, data for which are not now available. The differences, however, will probably not be such as to seriously affect the rates given in the tables.

The columns under "Averages" show the number of years for which data were available and the average number of cases reported during those years. Where information was obtainable the averages were computed by adding together the number of cases reported during